

# ILLINOIS COMMERCE COMMISSION



## 2003 ANNUAL REPORT ON ACCIDENTS/INCIDENTS Involving Hazardous Materials on Railroads in Illinois



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# STATE OF ILLINOIS



## ILLINOIS COMMERCE COMMISSION

May 27, 2004

The Honorable Rod R. Blagojevich  
Governor, State of Illinois

The Honorable Emil Jones, Jr.  
President of the Senate

The Honorable Frank Watson  
Minority Leader of the Senate

The Honorable Michael J. Madigan  
Speaker of the House

The Honorable Tom Cross  
Minority Leader of the House

Re: 2003 ICC Hazardous Materials Report

Dear Governor Blagojevich and Members of the Legislative Leadership:

The attached report by the staff of the Illinois Commerce Commission is hereby submitted to the General Assembly in response to 625 Illinois Compiled Statutes, 18c-1204. Section 18c-1204 directs the Commission to "prepare and distribute to the General Assembly... a report on railway accidents in Illinois which involve hazardous materials."

As required by Illinois law, this report includes the location, substance involved, amounts involved, and the suspected reason for each accident, which occurred in Illinois during calendar year 2003. The report also provides the rail line and point of origin of the hazardous material involved in each accident.

May 27, 2004  
Page Two

Additionally, the report contains the following related information:

- Details regarding events where hazardous material was involved but no release occurred;
- An overview of ICC activities relative to the transportation of hazardous materials by rail within the State; and,
- A history of the railroad hazardous materials program.

Should you have questions or need clarification about any of the information presented, please contact Peggy Snyder, Director of Governmental Affairs, at (217) 524-0619.

Sincerely,

Edward C. Hurley  
Chairman

## TABLE OF CONTENTS

SECTION	PAGE
1.0 INTRODUCTION	3
2.0 BACKGROUND	3
3.0 COMMISSION HAZARDOUS MATERIALS SAFETY PROGRAM	4
3.1 INSPECTION OF RAIL EQUIPMENT AND SHIPPER/CONSIGNEE FACILITIES	4
3.1.1 RAILROAD EQUIPMENT	5
3.1.2 ROLL-BY	5
3.1.3 DOCUMENTATION	5
3.1.4 SHIPPING FACILITIES	6
3.2 TECHNICAL ASSISTANCE PROGRAM TO INTERESTED PARTIES	6
3.3 ESCORT OF NUCLEAR MATERIAL IN ILLINOIS	6
3.4 EDUCATION AND OUTREACH ACTIVITIES	6
4.0 HAZARDOUS MATERIAL PROGRAM ACTIVITY IN 2003	7
4.1 INSPECTIONS OF STATIONARY RAILROAD YARD EQUIPMENT	7
4.2 ROLL-BY INSPECTIONS	7
4.3 SUMMARY OF ALL INSPECTIONS	7
5.0 CRITICAL DEFECTS	8
6.0 TAMAROA DERAILMENT – FEBRUARY 9, 2003	8
7.0 SUMMARY	9
8.0 DATA DESCRIBING ACCIDENTS/INCIDENTS IN ILLINOIS IN 2003	9
A. DERAILMENTS THAT RESULTED IN HAZARDOUS MATERIAL RELEASE	11
B. DERAILMENTS IN WHICH NO HAZARDOUS MATERIAL WAS RELEASED	12
C. HAZARDOUS MATERIALS RELEASED, BUT NO DERAILMENT OCCURRED	13
D. LIST OF RAILROADS CITED IN TABLES	22
 <u>ATTACHMENTS</u>	
1. RECOGNIZING AND IDENTIFYING HAZARDOUS MATERIAL	
2. SAMPLE WAYBILL	
3. SAMPLE TRAIN CONSIST	
4. EMERGENCY RESPONSE INFORMATION	
5. SAMPLE BILL OF LADING	
6. TOP 125 HAZARDOUS COMMODITY MOVEMENTS BY TANK CAR	

## ***1. INTRODUCTION***

This report has been prepared by the staff of the Illinois Commerce Commission's Railroad Safety Section in accordance with the provisions of 625 ILCS 5/18c-1204. The law directs the Commission to "prepare and distribute to the General Assembly ... a report on railway accidents in Illinois which involve hazardous materials." The law also provides that the report shall include the location, substance involved, amounts involved, and the suspected reason for each accident, as well as the rail line and point of origin of the hazardous material involved in each accident."

Additionally, this report contains the following related information:

- Details regarding events where hazardous material was involved but no release occurred
- An overview of Commission activities relative to the transportation of hazardous materials by rail within the State
- Review of the transportation of nuclear and radioactive materials by rail within the State; and
- A summary of the Tamaroa derailment that occurred on February 9, 2003 in which several hazardous material transporting tank cars released toxic materials requiring the evacuation of the town's 750 residents for 5 days

## ***2. BACKGROUND***

Illinois is a key hub in the nation's transportation system. With a railroad network of slightly over 7,200 miles, Illinois' rail system is the country's second largest. The Chicago and St Louis terminal switching districts are the two key points of interchange between eastern, western, northern, and southern rail systems and handle over 40,000 rail cars on a typical weekday.

Ten percent of all rail traffic in Illinois involves the movement of hazardous materials. In 2002, railroads in Illinois handled 480 million tons of total freight which is first in the nation in both tons and the number of carloads carried. Of this total, railroads in Illinois handled 44 million tons of hazardous materials.

The U.S. Department of Transportation (USDOT) classifies approximately 3,500 substances as hazardous. Many of these substances, ranging from mild irritants to poisonous and radioactive materials, are routinely transported by rail through populous regions of the country and can have the potential to severely impact the environment and public health, if inadvertently released into the environment. Individual shipments can range in quantity from packages as small as a pint that may be carried inside a highway trailer or container on a flat car, to as much as 42,000 liquid gallons carried in a tank car.

The Association of American Railroads (AAR) Bureau of Explosives has identified approximately 125 hazardous materials comprising 88 percent of all hazardous materials transported by railroad. Attachment 6 provides a list of the most commonly transported materials and the hazard class of each commodity.

Under federal law (49 CFR, Part 212) individual states are authorized to participate in the Railroad Hazardous Material Inspection Program administered by the USDOT. The program is under the supervision of the FRA. FRA certifies state inspectors so that they may have the same legal and administrative authority as federal inspectors in assuring the safe transport of hazardous material through inspection and investigation. The Commission employs two full-time federally certified inspectors responsible for all of Illinois.

Commission inspectors focus the majority of their effort in the field conducting inspections at railroad yards and the industrial facilities of shippers and consignees of hazardous materials. The inspectors are also responsible for maintaining inspection data, responding to complaints from rail employees and the public, and for providing information concerning the transport of hazardous material within Illinois to other state, regional and local agencies.

In 2003, Commission inspectors inspected 15,701 cars and 962 Waybills. Over the long term since 1981, when Commission inspectors found violations in 12 percent of all inspections, compliance has improved to the point in 2003, that Commission inspectors found violations in only 3.4 percent of all inspections. The ultimate goal is to find no violations, however attainment of that goal appears to be some ways off in the distance.

The large increase in compliance observed since 1981, is due in part to Commission initiated conferences with rail carriers and shippers to educate and inform them of the complex and continually evolving regulations. The educational meetings and informational sessions are followed up with inspections by Commission staff to insure that the lessons learned from the education and information sessions, have been implemented by the shipper or rail carrier in their day-to-day activities.

### ***3. COMMISSION HAZARDOUS MATERIALS SAFETY PROGRAM***

The Commission's hazardous materials safety program is comprised of four main components:

- Inspection of railroad equipment and shipper/consignee facilities
- The provision of technical assistance to shippers/consignees and rail carriers
- The inspection and transport of nuclear materials; and
- Education and outreach activities to shippers/consignees, rail carriers, emergency responders and the general public

#### **3.1 Inspection of Rail Equipment and Shipper/Consignee Facilities**

Four types of inspections are made by Commission inspectors: stationary railroad equipment such as tank cars at a yard or plant, railroad equipment in transit in the consist of a through or yard train known as a "roll-by" inspection; analysis of shipping papers and related documentation; and inspection of facilities that either ship or receive hazardous commodities.

### 3.1.1 Railroad Equipment

Hazardous material equipment inspections are performed on a stationary hazardous material rail car. Normally, this type of inspection occurs within a railroad yard or at the loading or unloading terminal within a shipper's facility. The inspection assures that the cars are affixed with the required placards identifying the hazardous commodities being transported. Attachment 1 provides examples of the various placards and the information they provide, which is of critical importance to emergency response personnel. Commission inspectors verify that the rail car's markings, stenciling, tank and valve test dates, and mechanical safety features, are in compliance with federal regulations.

### 3.1.2 Roll-By

A roll-by inspection involves monitoring an entire train while in motion. The location of loaded hazardous material cars, as well as those cars that have been unloaded, but that still contain residue of the commodity transported, are observed in relation to the locomotives, occupied cabooses, other hazardous material cars, and certain other types of cargo cars. Specific types of hazardous material cars are required to be spotted at particular locations within a train. Should Commission inspectors determine that cars are not correctly located within the train's consist, the inspector may require the rail carrier to stop the train and order the cars to be correctly placed.

Proper placement of hazardous material cars within a train's consist is of great importance to the train crew who could be severely injured if a derailment were to occur. For example, hazardous material cars containing liquefied petroleum gas (LPG), as well as other highly flammable commodities, may not be positioned next to the locomotive.

### 3.1.3 Documentation

Documentation inspections involve examining waybills and bills of lading to verify that the documents were completed correctly. Such inspections normally occur at the office of the shipper or consignee, or at the yard office of the rail carrier. The bill of lading is a document providing a description of the type and quantity of commodities being transported. Attachment 5 provides a sample bill of lading.

The bill of lading must include a 24-hour emergency response telephone number clearly visible, in order to facilitate the appropriate response by emergency providers in case of an accident or derailment. Inspectors examine the bill of lading to verify that the correct shipping name, hazard class, 4-digit commodity identification number, and weight are all present and correctly stated.

Emergency responders rely on the provision of this shipping information in the case of a spill or other type of incident concerning the shipment. Depending upon the particular substance being transported; incorrect, or incomplete information, can result in injury or death to responders, rail employees and the public in the event of a derailment that could

cause an inadvertent release.

#### 3.1.4 Shipping Facilities

Shipping facility inspections are conducted at privately owned facilities. The purpose of the inspection is to assure that the requirements of Title 49 of the United States Code of Federal Regulations (CFR) are being complied with. All regulations of 49CFR must be complied with in order to permit the continued ability of the shipper or consignee to receive or ship hazardous materials.

### **3.2 Technical Assistance Program to Shippers, Consignees and Emergency Responders**

Commission inspectors respond to railroad related collisions/incidents involving hazardous material. The Commission's role is to provide technical assistance to emergency response personnel. The assistance provided is that of determining if the documentation and information provided by the rail carrier or shipper to the emergency responder, is correct and adequate to permit the responder to safely handle the incident. Commission inspectors will also advise the emergency response team as to proper mitigation and clean up procedures and requirements. Commission inspectors assist in investigation of the incident in order to identify the cause, as well as any violations that may have contributed either directly, or indirectly in causing the incident. Commission inspectors are on-call 24-hours a day to respond to any incident.

### **3.3 Escort of Nuclear Material in Illinois**

The movement of nuclear material in or through the State of Illinois by rail occurs infrequently. However, as spent nuclear fuel materials begin to move to a national repository, (Yucca Mountain in Nevada) more frequent shipments are expected. The current protocol for the shipment of nuclear material requires that the train be stopped and inspected prior to entering Illinois. Nuclear material shipments are escorted by Commission inspectors, as well as Commission track inspectors who verify that the rail line to be traveled is in suitable condition.

Radioactive material is probably the most controversial and least understood class of hazardous material being transported by rail in Illinois today. To date, there have been no incidents involving the transport of radioactive material, however widespread concern on the part of the public due to safety and security issues, warrant the careful planning and inspection of all radioactive shipments traveling over the Illinois rail network.

### **3.4 Education and Outreach Activities**

As provided by State statute, Commission inspectors offer training for local law enforcement and emergency response personnel. The training is intended to acquaint participants with railroad car marking and placarding requirements and emergency response manuals and guide books. Fire departments are provided with instruction and training concerning tank car structure and



damage assessment. Commission inspectors also make presentations on the interpretation and application of federal and state hazardous materials regulations to railroad company personnel. Since 1990, seventy-four educational or training presentations on hazardous material safety have been made to approximately 1,600 persons affiliated with a variety of emergency planning and response teams.

#### **4. COMMISSION HAZARDOUS MATERIAL SAFETY PROGRAM ACTIVITY IN 2003**

Summary of all Inspections Conducted by Commission Inspectors 2000 through 2003. (Source: FRA)

<b>Year</b>	<b>Inspections</b>	<b>Units Inspected</b>	<b>Defects Identified</b>	<b>Defects Per Unit</b>
2000	415	8,013	282	0.035
2001	387	9,200	394	0.042
2002	328	7,718	274	0.035
2003	424	9,641	248	0.026
<b>Total</b>	<b>1,554</b>	<b>34,572</b>	<b>1,198</b>	

##### **4.1 Summary of Inspections of Stationary Railroad Yard Equipment. (Source: IHRMA)**

<b>Year</b>	<b>Yard Inspections</b>	<b>Placard Violations</b>	<b>Equipment Violations</b>	<b>Documentation Violations</b>	<b>Other Violations</b>	<b>Total Violations</b>
2001	225	443	282	0	0	950
2002	194	372	161	1	0	728
2003	137	320	196	0	0	653
<b>Total</b>	<b>556</b>	<b>1135</b>	<b>639</b>	<b>1</b>	<b>0</b>	<b>2,331</b>

##### **4.2 Summary of Roll-By Inspections. (Source: IHRMA)**

<b>Year</b>	<b>Roll-By Inspections</b>	<b>Placard Violations</b>	<b>Equipment Violations</b>	<b>Documentation Violations</b>	<b>Other Violations</b>	<b>Total Violations</b>
2001	77	120	2	2	0	201
2002	66	125	2	1	2	196
2003	91	111	17	2	0	221
<b>Total</b>	<b>234</b>	<b>356</b>	<b>21</b>	<b>5</b>	<b>2</b>	<b>618</b>

##### **4.3 Summary of All Inspections. (Source: IHRMA)**

<b>Year</b>	<b>All Types of Inspections</b>	<b>Placard Violations</b>	<b>Equipment Violations</b>	<b>Documentation Violations</b>	<b>Other Violations</b>	<b>Total Violations</b>
2001	302	563	284	2	0	1,151
2002	260	497	163	2	2	924
2003	229	432	213	2	0	876
<b>Total</b>	<b>791</b>	<b>1,492</b>	<b>660</b>	<b>6</b>	<b>2</b>	<b>2,951</b>

## **5. CRITICAL DEFECTS**

Closure problems, commodity stenciling problems, brake system problems, coupler problems, and tanks overdue for retest, represent the types of incidents that are considered critical defects. In 2003, Commission inspectors found 125 loose closures of hazmat tank cars preventing possible ground contamination and injuries to railroad employees and the public. Commission inspectors also found three hazmat tank cars that were overdue for retest necessitating that the cars be taken out of service until the cars could be tested to verify they were safe for use in transporting hazardous materials. In addition, 20 hazmat tank cars were found with missing or incomplete commodity stenciling which could lead to misinformation to emergency responders if the car was to be involved in an accident/incident.

Contrary to federal regulation, one hazmat tank car was found without a double shelf coupler which prevents overriding of the coupler system in an accident. When properly equipped with a double shelf coupler, the coupler will prevent the car from striking and penetrating an adjacent tank car in the train's consist, which would compromise the car's integrity and result in a potentially catastrophic release of toxic materials.

During one of hundreds of routine inspections performed by Commission inspectors in 2003, a hazmat tank car brake beam was determined to be gouging the wheel flange and had cut the width of the flange down from 1 inch to less than 3/8 of an inch. This defect could have caused the wheel to split a switch point and cause a major derailment. The potential derailment was prevented because of the thorough inspection performed by the Inspector and the quick action taken to correct this critical defect.

Also, a train traveled 200 miles with a Liquefied Petroleum Gas tank car next to the engines, which is a major violation of the Federal Regulations, until a State Hazardous Materials Inspector had them moved the tank car so it would be back in compliance. This violation was not only dangerous for public safety in general but was very dangerous to the train crew if there was an accident. An LPG tank car positioned next to the trains engines provides an ignition source if the tank car is compromised.

## **6. TAMAROA**

On February 9, 2003, a Canadian National – Illinois Central freight train traveling north from Memphis to Chicago, derailed in Tamaroa in Perry County. The derailment involved 20 cars that had completely left the tracks. Nine of these cars carried hazardous materials and were compromised resulting in the release of 57,840 gallons of methanol, 30,723 gallons of hydrochloric acid, 7,000 gallons of vinyl chloride, and 100 gallons of formaldehyde.

The release required the evacuation of all the residents of the Town within a 3 mile perimeter of the spill site. No residents were killed, however some residents were treated for exposure, and all residents suffered economic and emotional trauma due to the evacuation.

The State's emergency response system was activated to handle the incident. The overall response involved hundreds of emergency personnel from half a dozen state, regional and local emergency response agencies. The total cost to contain and treat the incident, as well as the remediation, cost several million dollars. The derailment was caused by a defective insulated joint in the track at the cross-over.



*Tamaroa Derailment: February 9, 2003*

## **7. SUMMARY**

The nature of catastrophic incidents that can occur from hazardous material incidents is cause for prudent exercise of state and federal regulations and the necessity of having staff to assure compliance with all applicable regulations. Commission inspectors routinely discover minor violations and defects, and occasionally major violations or defects, that if not corrected, could lead to serious incidents likely to result in loss of life and extensive damage to property, such as occurred in Tamaroa.

## **8. DATA DESCRIBING ACCIDENTS AND/OR INCIDENTS IN ILLINOIS IN 2003**

Specific data required by 625 ILCS 5/18c-1204 is shown in tabular form on the following pages.

The applicable section states: "The staff shall prepare and distribute to the General Assembly, in April of each year, a report on railway accidents in Illinois which involve hazardous material.

The report shall include the location, substance involved, quantity involved, and the suspected reason for each accident. The report shall also reveal the rail line and point of origin of the

hazardous material involved in each accident.” The remainder of this report provides three tables and a number of attachments.

**Table A** shows railroad derailments where hazardous material was being transported in the derailed railroad equipment and a hazardous material release occurred.

**Table B** shows railroad derailments where hazardous material was being transported in the train and the railroad equipment derailed, however, there was no release of any hazardous material.

**Table C** shows hazardous material releases from railroad equipment where no derailment was involved.

The location column in Tables A, B, and C indicates the county where the accident/incident occurred and the nearest identifiable location. Information for all three tables was obtained from reports filed by the railroad with the Commission, as well as from the USDOT’s Research and Special Programs Administration.

Three categories of information not specifically asked for by the General Assembly have been added to make the report more useful. The first category is “Amount Released.” This distinction is important in order to differentiate the “Amount Involved” required by the General Assembly, from the more significant quantity of “Amount Released.” The “Amount Involved” is simply the quantity of commodity that was being transported; the “Amount Released” into the environment by accident is far more critical.

The second category added is the “Type of Equipment” involved. The final additional category is the date of the incident. In the tables, the railroad companies are identified by their FRA reporting marks; for example NS is the Norfolk Southern Railway. A listing of the complete names follows Table C.

**TABLE A****Hazardous Materials Physically Involved In Derailment And Hazardous Materials Release Occurred**

Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Tamaroa	IC	Methanol ( 5 )	Saint Rose, LA	Broken bonded rail at signal	150,471 gals.	57,840 gals.	T	2/9/03
Perry		Formaldehyde	Geismar, LA		21,170 gals.	100 gals.	T	
		Hydrochloric Acid ( 2 )	Geismar, LA		40,979 gals.	30,723 gals.	T	
		Vinyl Chloride	Calvert City, KY		25,623 gals.	7,000 gals.	T	
St. Anne	CSX	Sodium Chlorate	Brandon, NB	Drawbar pulled out and punctured door	217,500 lbs.	< 8 oz.	CH	2/28/03
Iroquois								
Chicago	NS	Diesel Fuel	Unknown	Derailment	4,000 gals.	200 gals.	E	4/18/03
Cook								
Paris	CSX	Diesel Fuel	Unknown	Broken rail	4,500 gals.	3,000 gals.	E	11/14/03
Edgar								

T = Tank

E = Engine

CH = Covered Hopper

R = Refrigerated Car

COFC = Container on Flat Car

**TABLE B****Hazardous Materials Physically Involved In Derailment Where No Hazardous Materials Release Occurred**

Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Ancona Livingston	BNSF	Battery Fluid	San Ramon, CA	Unknown	17,539 kgs.	None	TOFC	2/11/03
Sterling Whiteside	UP	Chlorine	Montreal, QB	Locked up traction motor	98,000 lbs.	None	T	2/28/03
Joliet Will	BNSF	Ethylene Glycol ( 2 )	Prentis, AB	Bad ties – wide gauge	161,878 kgs.	None	T	4/5/03
Galesburg Knox	BNSF	Liquefied Petroleum Gas	St. John, NB	Broken rail	57,906 kg.	None	T	7/8/03
Chicago Heights Cook	UP	Aluminum Smelting By-product	Chicago Heights, IL	Split switch	179,300 lbs.	None	T	11/11/03
Paris Edgar	CSX	Ethanol	Decatur, IL	Broken rail	29,948 gals.	None	T	11/14/03
Galesburg Knox	BNSF	Petroleum Distillates	St. Paul, MN	Track failure	186,845 lbs.	None	T	12/21/03

T = Tank TOFC = Trailer on Flat Car

**TABLE C****Hazardous Materials Released From Rail Cars Where No Derailment Occurred**

Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
East Hazel Crest Cook	IC	Anhydrous Ammonia	Clinton, WI	Liquid eduction valve not secured and plug loose	33,623 gals.	Vapor	T	1/6/03
Chicago Cook	UP	Hydrochloric Acid	Calvert City, KY	Manway cover bolts loose	20,849 gals.	5 gals.	T	1/12/03
Alton Madison	UP	Phosphorus Pentasulphide	Sauget, IL	Vapor valve loose	196,000 lbs.	Vapor	CH	1/29/03
Riverdale Cook	CSX	Elevated Temperature Liquid, N.O.S.	East Chicago, IN	Manway bolt stripped and bad gasket	23,748 gals.	1 gal.	T	2/5/03
Chicago Cook	IC	Combustible Liquid, N.O.S.	Houston, TX	Two manway cover bolts loose and bad gasket	23,509 gals.	1 gal.	T	2/6/03
Alsip Cook	IHB	Benzene	Lima, OH	Bad gasket	25,711 gals.	37 lbs.	T	2/7/03
Corwith Cook	BNSF	Diesel Fuel	Unknown	Punctured fuel tank	Unknown	< 100 gals.	TOFC	2/12/03
East Hazel Crest Cook	IC	Sodium Hydroxide Solution	Lemont, IL	Two manway bolts loose	16,500 gals.	¼ gal.	T	2/13/03

N.O.S. = Not Otherwise Specified T = Tank E = Engine TOFC = Trailer on Flat Car COFC = Container on Flat Car PT = Portable Tank  
CH = Covered Hopper

Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Cicero Cook	IC	Waste Aluminum Smelting By-product	Baie Comeau, PQ	End gate damaged and safety pins not secured	21.5 cu. yards	1,000 lbs.	Box	2/24/03
Cicero Cook	IC	Alcohols, N. O. S.	Winnebago, MN	Manway bolts not secured	30,621 gals.	2.5 gals.	T	3/7/03
Chicago Cook	UP	Diesel Fuel	Unknown	Overfilled engine	Unknown	200 gals.	E	3/22/03
Chicago Cook	CSX	Octafluoropropane	Charleston, SC	Valve bolts loose	35,620 lbs.	Vapor	PT	3/31/03
Schiller Park Cook	CP	Corrosive Liquid, Toxic, N.O.S.	Beulah, ND	Defective valve	24,000 kgs.	1 liter	PT	4/1/03
Bensenville Cook	CP	Diesel Fuel	Unknown	Overfilled engine	3,000 gals.	25 gals.	E	4/2/03
Homewood Cook	IC	Anhydrous Ammonia	East Dubuque, IL	Liquid valve loose and plug loose	33,593 gals.	¼ gal.	T	4/3/03
Chicago Cook	CSX	Diesel Fuel	Unknown	Side swiped another rail car	4,900 gals.	5 gals.	E	4/9/03
Centralia Marion	IC	Hydrogen Peroxide, Aqueous Solutions, Stabilized	Woodstock, TN	Safety vent disc ruptured	20,984 gals.	½ gal.	T	4/9/03

N.O.S. = Not Otherwise Specified T = Tank E = Engine TOFC = Trailer on Flat Car COFC = Container on Flat Car PT = Portable Tank  
CH = Covered Hopper



Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Chicago Cook	UP	Diesel Fuel	Unknown	Hole in fuel tank	3,500 gals.	5 gals.	E	4/9/03
East St. Louis St. Clair	KCS	Hydrochloric Acid	Geismar, LA	Manway gasket defective	Load	Minimal	T	4/10/03
Bensenville Cook	CP	Pentamethylheptane	Montreal, QB	Improper blocking and bracing	55 gals.	1 liter	COFC	4/10/03
Chicago Cook	NS	Diesel Fuel	Unknown	Broken fuel injector	4,000 gals.	100 gals.	E	4/11/03
Abbott Park Lake	CP	Diesel Fuel	Unknown	Bad gasket	4,000 gals.	200 gals.	E	4/14/03
Urbana Champaign	IC	Ethyl Alcohol	Tuscola, IL	Defective valve flange	29,951 gals.	¾ gal.	T	5/2/03
Utica La Salle	CSX	Aniline	Geismar, LA	Two manway bolts loose	20,839 gals.	1 gal.	T	5/6/03
Joliet Will	EJE	Styrene Monomer, Stabilized	Texas City, TX	Defective valve and loose plug	184,000 lbs.	Negligible	T	5/12/03
Dupo St. Clair	UP	Alkyl Sulfonic Acids, Liquid	Dupo, IL	Rubber liner failure	56,000 lbs.	2 gals.	PT	5/16/03

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CH = Covered Hopper

Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Anna Union	IC	Diesel Fuel	Unknown	Vandalism	3,000 gals.	2,000 gals.	E	5/17/03
Bensenville Cook	CP	Flammable Liquids, N.O.S.	Germany	Improper blocking and bracing	55 gals.	50 gals.	COFC	5/22/03
Homewood Cook	IC	Anhydrous Ammonia	East Dubuque, IL	Liquid valve loose and plug loose	33,678 gals.	Vapor	T	5/24/03
Centralia Marion	IC	Anhydrous Ammonia	Decatur, IL	Leak around slip tube gauging device	33,668 gals.	Vapor	T	5/28/03
Chicago Cook	UP	Diesel Fuel	Unknown	Overfilled engine	Unknown	100 gals.	E	6/17/03
East St. Louis St. Clair	KCS	Methyl Isobutyl Carbinol	Sauget, IL	Bottom outlet valve packing nut loose	20,848 gals.	2 gals.	T	6/18/03
Homewood Cook	IC	Hydrochloric Acid	Geismar, LA	Rubber liner failure	20,469 gals.	5 gals.	T	6/24/03
Centralia Marion	IC	Ethylene Oxide	Mc Cook, IL	O ring in safety relief valve defective	25,771 gals.	Vapor	T	6/28/03
Schiller Park Cook	CP	Diesel Fuel	Unknown	Vehicle hit train engine	100 gals.	100 gals.	E	7/7/03

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CH = Covered Hopper

Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Chicago Cook	IC	Alcohols, N. O. S.	Benson, MN	Bottom outlet valve an cap were not secured	30,714 gals.	2 gals.	T	7/11/03
Chicago Cook	IC	Alcohols, N.O.S.	Hastings, NE	Center sill weld leaking	30,040 gals.	60 gals.	T	7/11/03
Chicago Cook	IC	Styrene Monomer, Stabilized	Scotford, AB	Three manway bolts were loose	25,265 gals.	1.5 gals.	T	7/12/03
Northlake Cook	UP	Ammonium Chloride	Oakland, CA	Lid came off container	Unknown	Minimal	COFC	7/12/03
Homewood Cook	IC	Styrene Monomer, Stabilized	Scotford, AB	Manway cover gasket misaligned	25,178 gals.	1 gal.	T	7/21/03
Homewood Cook	IC	Styrene Monomer, Stabilized	Scotford, AB	Manway cover gasket misaligned	25,168 gals.	1 gal.	T	7/21/03
East St. Louis St. Clair	UP	Alcohols, N.O.S.	Russell, KS	Defective bottom outlet valve	31,539 gals.	1 gal.	T	7/30/03
Galesburg Knox	BNSF	Liquefied Petroleum Gas	St. Paul, MN	Tank car overfilled	33,872 gals.	30 gals.	T	8/25/03
Decatur Macon	NS	Alcohols, N.O.S.	Decatur, IL	Tank car overfilled	30,000 gals.	10 gals.	T	8/27/03

N.O.S. = Not Otherwise Specified T = Tank E = Engine TOFC = Trailer on Flat Car COFC = Container on Flat Car PT = Portable Tank  
CH = Covered Hopper

Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Schiller Park Cook	CP	Synthetic Resin	Montreal, QB	Defective spigot	5,200 gals.	20 gals.	PT	9/2/03
Springfield Sangamon	NS	Flammable Liquids, N.O.S.	Unknown	Defective gasket	30,000 gals.	2 gals.	T	9/8/03
Mt. Vernon Jefferson	NS	Molten Sulfur	Hartford, IL	Defective manway cover gasket	13,438 gals.	2 gals.	T	9/12/03
Sterling Whiteside	UP	Diesel Fuel	Unknown	Ruptured high pressure fuel line	5,000 gals.	2,000 gals.	E	9/16/03
Decatur Macon	NS	Diesel Fuel	Unknown	Hole in fuel tank	Unknown	40 gals.	E	9/20/03
Centralia Marion	IC	Hydrochloric Acid	Lemont, IL	Four manway bolts loose	20,908 gals.	1 cup	T	9/25/03
Riverdale Cook	CSX	Bisulfites, Aqueous Solutions, N.O.S.	Chicago, IL	Liquid valve line loose	21,076 gals.	10 gals.	T	10/1/03
Homewood Cook	IC	Anhydrous Ammonia	Woodward, OK	Safety relief valve open slightly	34,019 gals.	Vapor	T	10/7/03
Homewood Cook	IC	Anhydrous Ammonia	Woodward, OK	Safety relief valve open slightly	34,101 gals.	Vapor	T	10/7/03

N.O.S. = Not Otherwise Specified T = Tank E = Engine TOFC = Trailer on Flat Car COFC = Container on Flat Car PT = Portable Tank  
CH = Covered Hopper

Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
East Hazel Crest Cook	IC	N-propanol	West Toronto, ON	Five manway cover bolts not secured	30,155 gals.	Vapor	T	10/8/03
Homewood Cook	IC	Environmentally Hazardous Substances, Liquid, N.O.S.	Port Neches, TX	Safety valve o ring defective	20,844 gals.	1 gal.	T	10/9/03
Centralia Marion	IC	Petroleum Distillates, N.O.S.	Lemont, IL	Bottom outlet valve open and cap loose	29,987 gals.	20 gals.	T	10/18/03
Bedford Park Cook	CSX	Diesel Fuel	Paramus, NJ	Tank punctured by lift contractor	Unknown	75 gals.	COFC	10/19/03
Roxana Madison	NS	Sulfuric Acid	Hammond, IN	All bottom outlet valve bolts loose	12,339 gals.	176 gals.	T	10/20/03
Chicago Cook	NS	Hydrochloric Acid	Geismar, LA	Safety vent disc ruptured	20,923 gals.	Vapor	T	10/21/03
East St. Louis St. Clair	UP	Petroleum Distillates, N.O.S.	East Chicago, IN	Bottom outlet valve packing defective and cap gasket defective	26,739 gals.	1 gal.	T	10/24/03
Riverdale Cook	CSX	Fuel Oil	Ciniza, NM	Three manway cover bolts loose and gasket defective	22,751 gals.	3 gals.	T	10/29/03
Galesburg Knox	BNSF	Petroleum Distillates, N.O.S.	Baytown, TX	Five manway cover bolts loose and gasket defective	23,564 gals.	1 gal.	T	11/2/03

N.O.S. = Not Otherwise Specified T = Tank E = Engine TOFC = Trailer on Flat Car COFC = Container on Flat Car PT = Portable Tank  
CH = Covered Hopper

Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Chicago Cook	CSX	Diesel Fuel	Unknown	Tank punctured by lift contractor	Unknown	50 gals.	COFC	11/2/03
Galesburg Knox	BNSF	Corrosive Liquid, N.O.S.	Lemont, IL	Manway gasket misaligned	20,774 gals.	1 gal.	T	11/6/03
Riverdale Cook	CSX	Diesel Fuel	Unknown	Broken fuel line	Unknown	200 gals.	E	11/25/03
Metropolis Massac	UP	Diesel Fuel	Unknown	Fuel overflow release from retention tank	4,500 gals.	100 gals.	E	12/6/03
Cicero Cook	BNSF	Diesel Fuel	Seattle, WA	Tractor trailer driver error	Unknown	50 gals.	COFC	12/9/03
Riverdale Cook	CSX	Hydrochloric Acid	Midland, MI	Manway gasket defective and bolts loose	20,879 gals.	Vapor	T	12/15/03
Chicago Cook	IC	Alcohols, N.O.S.	Minden, NE	Three manway bolts loose and gasket misaligned.	30,110 gals.	.05 gal.	T	12/22/03
Galesburg Knox	BNSF	Waste Combustible Liquid, N.O.S.	North Portland, OR	Bottom outlet handle not secured.	30,048 gals.	< 10 gals.	T	12/23/03
Bridgeview Cook	UP	Diesel Fuel	Unknown	Broken sight glass	Unknown	200 gals.	E	12/27/03

N.O.S. = Not Otherwise Specified T = Tank E = Engine TOFC = Trailer on Flat Car COFC = Container on Flat Car PT = Portable Tank  
CH = Covered Hopper

Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Jacob Jackson	UP	Environmentally Hazardous Substances, Liquid, N.O.S.	Laredo, TX	No manway gasket	16,185 gals.	5 gals.	T	12/27/03
Decatur Macon	NS	Hydrochloric Acid	Calvert City, KY	Manway flange bolts loose	20,668 gals.	1 gal.	T	12/29/03

N.O.S. = Not Otherwise Specified T = Tank E = Engine TOFC = Trailer on Flat Car COFC = Container on Flat Car PT = Portable Tank  
CH = Covered Hopper

### RAILROAD COMPANIES CITED IN THE PRECEDING TABLES

<b>RR Code</b>	<b>Railroad Name</b>
BNSF	The Burlington Northern and Santa Fe Railway Company
CP	Canadian Pacific
CRL	Chicago Rail Link
CSX	CSX Transportation, Inc.
EJE	Elgin, Joliet & Eastern Railway Co.
IAIS	Iowa Interstate Railroad, Ltd.
IC	Canadian National/Illinois Central Railroad Company
IHB	Indiana Harbor Belt Railroad Co.
KBSR	Kankakee, Beaverville and Southern Railroad Company
KCS	Kansas City Southern
NS	Norfolk Southern Railway Company
TRRA	Terminal Railroad Association of St. Louis
UP	Union Pacific Railroad Company
WC	Wisconsin Central Railroad



## **LIST OF ATTACHMENTS**

Attachment 1:Recognizing and Identifying Hazardous Materials

Attachment 2:Sample Waybill

Attachment 3:Sample Consist

Attachment 4:Emergency Response Information

Attachment 5:Sample Bill of Lading

Attachment 6:Top 125 Hazardous Commodity Movements by Tank Car Origination

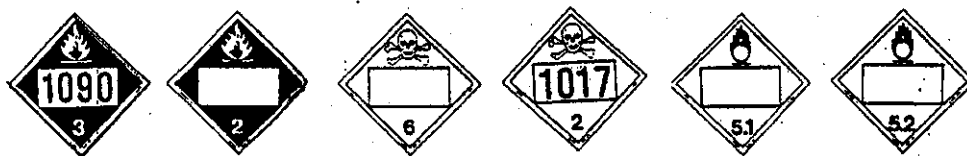
## RECOGNIZING AND IDENTIFYING HAZARDOUS MATERIALS

### PLACARD AND LABEL NOTES

Placards are diamond shaped — 10 3/4 inches square. The placard provides recognition information in a number of ways:

1. the colored background;
2. the symbol at the top;
3. The United Nations hazard class number at the bottom; and
4. the hazard class wording or the identification number in the center.
  - a. Color:
    - orange indicates explosive;
    - red indicates flammable;
    - green indicates nonflammable;
    - yellow indicates oxidizing material;
    - white indicates poisonous material;
    - white with vertical red stripes indicates flammable solid;
    - yellow over white indicates radioactive material; and
    - white over black indicates corrosive material.
  - b. Symbols:
    - the bursting ball symbol indicates explosive;
    - the flame symbol indicates flammable;
    - the slash W (W) indicates dangerous when wet;
    - the skull and crossbones indicates poisonous material;
    - the circle with the flame indicates oxidizing material;
    - the cylinder indicates nonflammable gas;
    - the propeller indicates radioactive;
    - the test tube/hand/metal symbol indicates corrosive; and
    - the word Empty indicates that the product has been removed, but a harmful residue may still be present.
  - c. United Nations Hazard Class Numbers:
    - 1 — Explosives
    - 2 — Gases
    - 3 — Flammable Liquids
    - 4 — Flammable Solids
    - 5 — Oxidizing Substances
    - 6 — Poisonous and Infectious Substances
    - 7 — Radioactive Substances
    - 8 — Corrosive Substances
    - 9 — Miscellaneous Dangerous Substances
  - d. Hazard Class or Identification Number

Below are some examples of placards.



SAMPLE WAYBILL

Attachment 2  
Page 1 of 2

\*\*\*\*\*  
\*  
\*\*\*\*\*

RTMX 21065

T/C

#123456

03 06 01

St. Louis

MO.

1212 St. Louis, MO.  
12 S. Street  
John Doe Inc.

John Doe Inc.  
Chicago, IL.

1/TC

Residue: Last Contained  
Acetone, 3, UN 1090, II, RQ (Acetone)

STCC 4908105

CHEMTREC EMERGENCY CONTACT 1-800-424-9300

SAMPLE WAYBILL

Attachment 2  
Page 2 of 2

\*\*\*\*\*  
\*  
\*\*\*\*\*

GAPX 6075 T/C

#123457

03 06 01

St. Louis

MO.

1212 St. Louis, MO.  
12 S. Street  
John Doe Inc.

John Doe Inc.  
Chicago, IL.

1/TC

Phenol, Molten, 6.1, UN 2312, II, RQ (Phenol)

20,000 GAL.

STCC 4921220

CHEMTREC EMERGENCY CONTACT 1-800-424-9300

## SAMPLE CONSIST

ATTACHMENT 3

TRAIN/JOB	CONDUCTOR			
NAME	CATAGORY—SECONDARY MANIFEST TYPE—THRU			
ENGINE - IDENT	HORSEPOWER	LENGTH	WEIGHT	STATUS
0142	3000	69	200E	
1001	3000	74	200E	
ENG 1005	3000	74	200E	
TOTAL	9000 HP	217 FEET	600 TONS	

## TRAIN/JOB

SEQ EQPMNT ID KND GWT COMDTY DESTN ZTS/CARR NXBLK CITY/STATE CONSIGNEE

## BLOCK --

1	BJOX	278	LC4T	131	CORN	7MT018	214H	MEMPHIS	TN		
							NOTIFY SHIPPER IF DELAYED				IF BAD ORDERED NOTIFY SHIPPER
2	BJOX	109	LC4T	131	CORN	7MT018	214H	MEMPHIS	TN		
							NOTIFY SHIPPER IF DELAYED				IF BAD ORDERED NOTIFY SHIPPER
3	BJOX	110	LC4T	131	CORN	7MT018	214H	MEMPHIS	TN		
							NOTIFY SHIPPER IF DELAYED				IF BAD ORDERED NOTIFY SHIPPER
4	CRDX	7227	LC4T	131	CORN	7MT018	214H	MEMPHIS	TN		
							NOTIFY SHIPPER IF DELAYED				IF BAD ORDERED NOTIFY SHIPPER
5	RTMX	21065	ET29	35		12ZA003	CR	CHICAGO	IL		
											R50 SPEED RESTRICTED CAR

1/TK

\*\*\*\*\*

RESIDUE: LAST CONTAINED

\* \*

ACETONE

\*\*\*\*\*

3

EMERGENCY CONTACT:

UN 1090

1-800-424-9300

II

RQ (ACETONE)

HAZMAT STCC = 4908105

6	GAPX	6075	LT19	36	POIS B	12ZA003	00	BRC	CHICAGO	IL
---	------	------	------	----	--------	---------	----	-----	---------	----

R50 SPEED RESTRICTED CAR

1/TC

\*\*\*\*\*

PHENOL, MOLTEN

\* \*

6.1

\*\*\*\*\*

UN 2312

EMERGENCY CONTACT:

II

1-800-424-9300

RQ (PHENOL)

HAZMAT STCC = 4921220

## EMERGENCY RESPONSE INFORMATION

### POTENTIAL HAZARDS

#### ~~FIRE OR EXPLOSION~~

- **HIGHLY FLAMMABLE:** Will be easily ignited by heat, sparks or flames.
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.

#### ~~HEALTH~~

- Inhalation or contact with material may irritate or burn skin and eyes.
- Fire may produce irritating, corrosive and/or toxic gases.
- Vapors may cause dizziness or suffocation.
- Runoff from fire control may cause pollution.

### PUBLIC SAFETY

- **CALL** Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

#### ~~PROTECTIVE CLOTHING~~

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

#### ~~EVACUATION~~

##### Large Spill

- Consider initial downwind evacuation for at least 300 meters (1000 feet).

##### Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

## EMERGENCY RESPONSE

### FIRE

**CAUTION:** All these products have a very low flash point; Use of water spray when fighting fire may be inefficient.

#### Small Fires

- Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam.

#### Large Fires

- Water spray, fog or alcohol-resistant foam.
- Use water spray or fog; do not use straight streams.
- Move containers from fire area if you can do it without risk.

#### Fire Involving Tanks or Car/Trailer Loads

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

### SPILL OR LEAK

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- A vapor suppressing foam may be used to reduce vapors.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Use clean non-sparking tools to collect absorbed material.

#### Large Spills

- Dike far ahead of liquid spill for later disposal.
- Water spray may reduce vapor; but may not prevent ignition in closed spaces.

### FIRST AID

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Wash skin with soap and water.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved; and take precautions to protect themselves.

## POTENTIAL HAZARDS

### HAZARD

- **TOXIC:** inhalation, ingestion, or skin contact with material may cause severe injury or death.
- Contact with molten substance may cause severe burns to skin and eyes.
- Avoid any skin contact.
- Effects of contact or inhalation may be delayed.
- Fire may produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

### FIRE OR EXPLOSION

- Combustible material: may burn but does not ignite readily.
- When heated, vapors may form explosive mixtures with air: indoors, outdoors, and sewers explosion hazards.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Contact with metals may evolve flammable hydrogen gas.
- Containers may explode when heated.
- Runoff may pollute waterways.
- Substance may be transported in a molten form.

## PUBLIC SAFETY

- **CALL** Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate enclosed areas.

### PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

### EVACUATION

#### Spill

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

#### Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.



## EMERGENCY RESPONSE

### FIRE

#### Small Fires

- Dry chemical, CO<sub>2</sub> or water spray.

#### Large Fires

- Dry chemical, CO<sub>2</sub>, alcohol-resistant foam or water spray.
- Move containers from fire area if you can do it without risk.
- Dike fire control water for later disposal; do not scatter the material.

#### Fire Involving Tanks or Car/Trailer Loads

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Do not get water inside containers.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

### SPILL/LEAK

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- DO NOT GET WATER INSIDE CONTAINERS.

### FIRST AID

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- For minor skin contact, avoid spreading material on unaffected skin.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

\*\*\*\*\* STRAIGHT BILL OF LADING — SHORT FORM — Original — Not Negotiable

Attachment 5  
Page 1 of 2

* * * * *										( SAMPLE )										Company									
RECEIVED, subject to the classifications and lawfully Blue tariffs in effect on the date of the receipt by the carrier of the property described in the Original Bill of Lading.																													
CUST. NUMBER 5		S.D. NUMBER 7		CAR OR TRAILER INITIAL AND NUMBER 15				DATE SHIPPED 8		MC OR DD EE		ROUTE CODE 5		SHP. PLT. 1		<p>the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of destination, if on its route, otherwise to deliver to another carrier on the route to said destination.</p> <p>It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Freight Bill of Lading set forth (1) in Official, Southern, Western and Florida Freight Classifications in effect on the date hereof, if this is a rail-carrier shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.</p> <p>Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.</p>													
NET WEIGHT 8		GROSS WEIGHT 8		NO. OF UNIT 4		UNIT CODE 3		PROD. CODE 3		PROD. PLT. 2																			
CONSIGNEE John Doe, Inc.										DESTINATION Chicago, IL										STATE OF Cook									
FROM John Doe, Inc. Permanent Postoffice Address of Shipper St. Louis, MO										AT																			
ROUTE ABC Railroad										DELIVERING CARRIER ABC					AGENT ABC					PER									
NO. PKGS.		DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS										WEIGHT (Sub. to Corr.)		RATE															
1 T/C		Residue: Last Contained Acetone 3 UN 1090 II RQ ( Acetone )  EMERGENCY CONTACT 1-800-424-9300  HAZ MAT STCC = 4908105										Residue																	
This shipment is correctly described: <b>CORRECT WEIGHT IS</b> LBS. subject to verification by the Eastern, Southern or Western Weighing and Inspection Bureau, whichever applicable, 18843 John Doe, Inc. SHIPPER										<b>THE TOTAL WEIGHT OF THE PALLETS USED ON THE SHIPMENT IS SHOWN ABOVE.</b>										<b>TRANSPORTATION FREE PER ABOVE</b>									
PURCHASE ORDER NO.					SEAL NUMBERS					THIS CAR LEASED TO: John Doe, Inc.					LIGHT-TARE WEIGHT IS														
IF CHARGES ARE TO BE PREPAID, WRITE OR STAMP HERE "TO BE PREPAID"  Prepaid					Subject to section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignee, the consignee shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.										SHIPPER  John Doe, Inc. PER														
SIGNATURE OF COMRAISON																													

PLANT COPY

\*\*\*\*\*  
 \* STRAIGHT BILL OF LADING — SHORT FORM — Original — Not Negotiable Attachment 5  
 \* Page 2 of 2  
 \*\*\*\*\*

RECEIVED, subject to the classification and tariff rates in effect on the date of the receipt by the carrier of the property described in the Original Bill of Lading.									
CUST. NUMBER	S.D. NUMBER	CAR OR TRAILER INITIAL AND NUMBER	DATE SHIPPED	MO. OF DEPT.	ROUTE CODE	SHP. PLT.	the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, signed, and sealed as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination.		
		GAPX 6075					It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Freight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classification in effect on the date hereof, if this is a rail-carrier shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.		
NET WEIGHT	GROSS WEIGHT	NO. OF UNIT	UNIT CODE	PROD. CODE	PROD. PLT.	Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.			
CONSIGNEE John Doe, Inc.				DESTINATION Chicago, IL		STATE OF Cook		COUNTY OF	
FROM John Doe, Inc. Permanent Postoffice Address of Shipper St. Louis, MO				AT					
ROUTE ABC Railroad				DELIVERING CARRIER ABC		AGENT ABC			
				PER					
NO. PKGS.	DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS					WEIGHT (Sub. to Corr.)	RATE		
1 T/C	Phenol, Molten 6.1 UN 2312 II RQ ( Phenol ) EMERGENCY CONTACT 1-800-424-9300 HAZ MAT STCC = 4921220					20,000 Gals.			
This shipment is correctly described; <b>CORRECT WEIGHT IS</b> LBS. subject to verification by the Eastern, Southern or Western Weighing and Inspection Bureau, whichever applicable, 18943 <b>John Doe, Inc.</b> SHIPPER									
PURCHASE ORDER NO.				SEAL NUMBERS		THIS CAR LEASED TO: John Doe, Inc.		LIGHT-TARE WEIGHT IS	
IF CHARGES ARE TO BE PREPAID, WRITE OR STAMP HERE <b>"TO BE PREPAID"</b> Prepaid				Subject to section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall make delivery of this shipment without payment of freight and all other lawful charges.				SHIPPER John Doe, Inc. PER	
SIGNATURE OF CONSIGNOR									

PLANT COPY

TOP 125 HAZARDOUS COMMODITY MOVEMENTS  
BY TANK CAR ORIGINATION

RANK	COMMODITY NAME	**HAZ CLASS
1	Freight All Kinds - Hazardous Materials	
2	Freight All Kinds - Hazardous Materials	
3	Sodium Hydroxide Solution	C
4	Petroleum Gases, Liquefied	CG
5	Sulfuric Acid	C
6	Elevated Temperature Liquid, N.O.S.	ORM
7	Ammonia, Anhydrous, Liquefied	CG
8	Chlorine	CG
9	Sulfur, Molten	ORM
10	Sulfur, Molten	FS
11	Vinyl Chloride, Inhibited	CG
12	Propane	CG
13	Fuel Oil	FL
14	Denatured Alcohol	FL
15	Methanol	FL
16	Gasoline	FL
17	Phosphoric Acid	C
18	Hydrochloric Acid	C
19	Styrene Monomer, Inhibited	FL
20	Carbon Dioxide, Refrigerated Liquid	CG
21	Ammonium Nitrate	O
22	Gasoline	FL
23	Sodium Chlorate	O
24	Diesel Fuel	CL
25	Butane	CG
26	Petroleum Crude Oil	FL
27	Phenol, Molten	P
28	Fuel Oil	FL
29	Butadienes, Inhibited	CG
30	Fuel Oil	CL
31	Ethylene Oxide	CG
32	Methyl Tert Butyl Ether	FL
33	Fuel, Aviation, Turbine Engine	FL

RANK	COMMODITY NAME	**HAZ CLASS
34	Isobutane	CG
35	Environ. Hazardous Substances, Liquid	ORM
36	Environ. Hazardous Substances, Liquid	ORM
37	Environ. Hazardous Substances, Liquid	ORM
38	Propylene	CG
39	Propylene Oxide	FL
40	Vinyl Acetate, Inhibited	FL
41	Environ. Hazardous Substances, Solid, N.O.S.	ORM
42	Environ. Hazardous Substances, Solid, N.O.S.	ORM
43	Petroleum Crude Oil	CL
44	Xylenes	FL
45	Other Regulated Substances, Liquid	ORM
46	Cyclohexane	FL
47	Hydrogen Peroxide, Stabilized	O
48	Hexamethylenediamine, Solid	C
49	Acrylic Acid, Inhibited	C
50	Sulfuric Acid, Spent	C
51	Methyl Methacrylate Monomer, Inhibited	FL
52	Environ. Hazardous Substances, Solid, N.O.S.	ORM
53	Potassium Hydroxide, Solution	C
54	Toluene Diisocyanate	P
55	Phosphoric Acid	C
56	Acetic Acid, Glacial	C
57	Formaldehyde Solutions	C
58	Butyl Acrylates, Inhibited	FL
59	Environ. Hazardous Substances, Liquid, N.O.S.	ORM
60	Petroleum Distillates, N.O.S.	CL
61	Acetone	FL
62	Compounds, Cleaning Liquid	FL
63	Toluene	FL
64	Environ. Hazardous Substances, Solid, N.O.S.	ORM
65	Ammonium Nitrate Fertilizers	O
66	Ethanol	FL
67	White Asbestos	ORM
68	Elevated Temperature Liquid, N.O.S.	ORM

RANK	COMMODITY NAME	**HAZ CLASS
69	Liquefied Petroleum Gas	CG
70	Acrylonitrile, Inhibited	FL
71	Liquefied Petroleum Gas	CG
72	Petroleum Distillates, N.O.S.	FL
73	Environ. Hazardous Substances, Liquid	ORM
74	Hazardous Waste, Solid, N.O.S.	ORM
75	Benzene	FL
76	Fuel Oil	FL
77	Ethylene Dichloride	FL
78	Hydrogen Fluoride, Anhydrous	C
79	Liquefied Petroleum Gas	CG
80	Sulfur Dioxide	CG
81	Elevated Temperature Liquid, N.O.S.	ORM
82	Elevated Temperature Liquid, Flammable, N.O.S.	FL
83	Elevated Temperature Liquid, N.O.S.	ORM
84	Diesel Fuel	CL
85	Waste Flammable Liquids	FL
86	Other Regulated Substances, Liquid, N.O.S.	ORM
87	Isobutane	CG
88	Isopropanol	FL
89	Sodium Chlorate, Aqueous Solution	O
90	Other Regulated Substances, N.O.S.	ORM
91	Phosphorus, White, Dry	FS
92	Ferrous Chloride, Solution	C
93	Elevated Temperature Liquid, N.O.S.	ORM
94	Methanol	FL
95	Petroleum Distillates, N.O.S.	FL
96	Elevated Temperature Liquid, N.O.S.	ORM
97	Propylene	CG
98	Flammable Liquids, N.O.S.	FL
99	Environ. Hazardous Substances, Solid, N.O.S.	ORM
100	Butanols	FL
101	Nitric Acid	C
102	Polymeric Beads, Expandable	ORM
103	Combustible Liquids, N.O.S.	CL

RANK	COMMODITY NAME	**HAZ CLASS
104	Acetic Anhydride	C
105	Fuel Oil	CL
106	Liquefied Petroleum Gas	CG
107	Fuel Oil	CL
108	Butylene	CG
109	Ferric Chloride, Solution	C
110	Freight All Kinds - Hazardous Materials	
111	Acetaldehyde	FL
112	Other Regulated Substances, Liquid	ORM
113	Batteries, Wet, Filled with Acid	C
114	Maleic Anhydride	C
115	Hydrocarbons, Liquid, N.O.S.	FL
116	Sulfuric Acid, Fuming	C
117	Ammonium Nitrate, Liquid	O
118	Methyl Chloride	CG
119	Alcoholic Beverages	FL
120	Elevated Temperature Liquid, N.O.S.	ORM
121	Combustible Liquid, N.O.S.	CL
122	Ethyl Acetate	FL
123	Ethyl Acrylate, Inhibited	FL
124	Kerosene	FL
125	Other Regulated Substances, Liquid, N.O.S.	ORM

\*\*CG - Compressed Gas  
 FL - Flammable Liquid  
 FS - Flammable Solid  
 CL - Combustible Liquid  
 O - Oxidizer  
 P - Poison  
 C - Corrosive  
 ORM - Other Regulated Material